

Lesson Learned During a Pandemic: A Phenomenological Study of Pregnant Women's Experience in Resource-Limited Setting

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Introduction: Pandemics like COVID-19 has strained healthcare systems globally, particularly in resource-limited settings where pre-existing healthcare gaps and constraints amplify the challenges faced by pregnant women. Having this lesson on pregnant women's experiences during COVID-19 offers invaluable insights into potential strategies and interventions needed to mitigate the impact of similar outbreaks in the future. Therefore, this phenomenological study aimed to uncover the experiences of pregnant women during the COVID-19 pandemic in Dilla town, Gedeo zone, southern Ethiopia.

Method and Materials: A descriptive phenomenological design was employed at Dilla University teaching hospital. A Purposive sampling technique was used and point of data saturation was declared at participant 16th. An in-depth interview was conducted in a private room after they received antenatal care services. The interviews were audiotaped, transcribed, and analysed using the open code software version 4.03. The interviews were transcribed verbatim to provide tick descriptions of data. Thematic analysis was employed using an inductive approach. Direct quotes from participants were included without any grammar editing to preserve their intended meaning.

Results: Our study found five predominant themes: mental health consequences of the COVID-19 pandemic, health impact of COVID-19, concerns over the economic impact of the COVID-19 pandemic, COVID-19 influence on social engagements, and challenge on getting reliable information.

Conclusion and Recommendation: This study identified that pregnant women experienced various challenges during the pandemic which includes psychological problems, health impact of COVID-19, economic problems, lack of reliable information and limited social support. Hence, implementing a customized approach by integrating psychosocial interventions with prenatal care services and conducting intensive health education sessions and economic empowerment are beneficial as mitigation strategies to better prepare for future pandemics.

Keywords: pandemic, COVID-19, pregnant women, lived experience, resource limited, phenomenological study, Dilla

Introduction

The World Health Organization (WHO) has stated that COVID-19 might not be considered a worldwide public health emergency anymore. However, nations are still required to enhance their efforts in managing the disease and be ready for potential future pandemics and other hazards.^{1,2} The possibility of a new variant emerging and leading to increased disease and fatalities continues to be a concern, and there is also a persistent risk of a new pathogen emerging that could be even more deadly. Scientific studies

also affirm that the possibility of the next pandemic happening soon is highly likely.^{3,4} Indeed, the recent COVID-19 pandemic has brought numerous challenges for societies worldwide and affected various aspects of people's lives. One particularly vulnerable group during this time were pregnant women, who faced distinct concerns and uncertainties regarding their health and the well-being of their unborn child.

The pandemic has strained healthcare systems globally, particularly in resource-limited settings where pre-existing healthcare gaps and constraints amplify the challenges faced by pregnant women. In these settings, access to routine antenatal care and essential resources such as personal protective equipment (PPE), medications, and skilled birth attendants may be limited, exacerbating the risks associated with pregnancy amid the pandemic.⁵⁻⁷ Studies revealed the decreasing number of patients seen at the outpatient department is directly linked to the weakened healthcare system, which has been further worsened by the pandemic. This situation has resulted in increased mortality rates among mothers and children, thus undoing the progress that had been made on this front.^{8,9}

In the other perspective, pregnant women in these settings often encounter socio-economic challenges resulting in inadequate nutrition, limited access to clean water and sanitation facilities, and overcrowded living conditions. These factors can further increase the vulnerability of pregnant women to COVID-19 infection and its potential complications.¹⁰⁻¹³ The experiences of pregnant women during the COVID-19 pandemic are influenced by various factors, including psychosocial conditions resulting from factors like lockdown measures, coping mechanisms, and uncertainty surrounding the virus and its impact on maternal and fetal health. Concerns about the transmission of the virus to the fetus and potential long-term effects on the newborn have been major sources of stress for expectant mothers.^{14,15} Difficulties in accessing reliable information, economic burden, and self-protection strategies are also significant factors that greatly shape their experience during this extraordinary global health crisis.^{7,16,17}

Also, various quantitative studies addressed the factors and impact of COVID-19 on pregnant women, understanding the experiences of pregnant women during the COVID-19 pandemic is crucial for identifying gaps in healthcare delivery and developing targeted interventions to address these challenges. It also contributes to developing more resilient healthcare systems and safeguards the health and well-being of pregnant women and their unborn children during pandemics. Overall, having this important lesson on pregnant women's experiences during COVID-19 holds immense significance, offering valuable insights into potential strategies and interventions needed to mitigate the impact of similar outbreaks in the future. In addition, this study will potentially fill gap in lack of sufficient qualitative research findings in settings where resources are very scarce in terms of infrastructure and skilled human power. Therefore, this phenomenological study aimed to uncover the experiences of pregnant women during the COVID-19 pandemic in Dilla town, Gedeo zone, southern Ethiopia.

Methods and Materials

Study Approach and Setting

A descriptive phenomenological research design was employed in this study, which was conducted at the Dilla University Teaching Hospital between July 15 and September 15, 2020 G.C. Dilla Town, the capital of the Gedeo zone located in the Southern Nations, Nationalities, and Peoples' Region (SNNPR), consists of two city administrations and six woredas. It is situated approximately 360 km from Addis Ababa, Ethiopia's capital city. The population of the town was 94, 189 according to the latest census. The hospital serves as a central facility for providing specialized care to patients referred from health centers, district hospitals, and private health institutions within the Gedeo Zone. Additionally, it also accommodates patients from the nearby Sidama and Oromia Regions. The Antenatal care unit (ANC) has 8 staff members and all are midwives by profession. In 2018 G. C, the hospital provided antenatal care services to approximately 2481 expectant women, while in 2020 G.C, around 2004 mothers received the service, but only 605 reached the fourth ANC visit.

Sampling Technique and Data Collection Procedures

Purposive sampling technique was used in this study. Data saturation confirmed at participant number 16th where new data was no longer providing significant additional insights. To avoid homogeneity from the same class, variations was observed to keep representativeness based on trimesters, parity and antenatal care visit number, then an in-depth

interview was conducted in a private room after they received antenatal care services. Pregnant women who experienced emergency obstetric conditions were excluded from the study.

Before the actual data collection, data collectors underwent a comprehensive training session lasting an entire day. During this training, they were fully briefed on the objectives and purpose of the study and mock session were also held. The interview process lasted between 25 and 30 minutes and was recorded after obtaining consent from the participants. Relevant literature guided to formulate the interview questions. Input from experts with relevant backgrounds also sought to evaluate the content validity of the tool. Twelve open-ended questions were answered by the participants which were translated into Amharic. Precautions were taken during the interview process to adhere to the COVID-19 prevention guidelines, including the use of masks, hand sanitizers, and maintaining physical distance. Probing was used to gather additional information. A checklist and memo were used to collect further data.

Ethical Clearance

The Institutional Review Board (IRB) of Dilla University's College of Medicine and Health Sciences approved this study. The respondents consented both verbally and in written after learning the study's purpose, objectives, and withdrawal rights from the study also informed well to the respondents any time not convenient.

Data Analysis and Quality Assurance

The in-depth interviews were audiotaped, transcribed, and analyzed using the open code software version 4.03. Two researchers from the team with relevant training and prolonged experience in conducting qualitative studies performed the analysis and supervised the study. The Braun and Clarke (2006) thematic analysis framework¹⁸ was employed to analyze the data. The framework involves six steps. Initially, the audiotapes carefully listened to multiple times (step 1). Next, the transcribed material coded to identify key elements and establish the foundation for the themes (step 2). A back-and-forth approach applied, involving proposing themes, documenting them, and returning to the coded material (steps 3–5). This iterative process continued until the themes comprehensively represent the entire data set (step 6). The interviews were transcribed verbatim to provide tick descriptions of data. Two other researchers then checked, corrected, and translated the transcripts. The study followed the four criteria for trustworthiness to ensure the rigor of this study: credibility, transferability, dependability and conformability. The data were saved as plain text and imported into open code software for coding and categorization. To ensure the validity and reliability of the study, researchers spent a significant amount of time in the research setting to gain an in-depth understanding of the data. The investigators collected rich data by allowing prolonged exposure. As a result, direct quotes from participants were included without any grammar editing to preserve their intended meaning.

Result

Socio-Demographic and Obstetric Characteristics of Study Participants

The in-depth interview aimed to evaluate the experiences of pregnant women during the pandemic and included a total of sixteen participants. Among the participants, the majority (13, 81.25%) were from urban areas. Additionally, about half of the participants (56.25%) were in the age range of 25 to 34 years (Table 1).

Table 1 Socio-Demographic and Obstetric Related Characteristics of the in-Depth Interview Participants (n=16)

Socio-Demographic Characteristics	Frequency	Percentage
Residence		
Rural	1	6.25
Semi –Urban	2	12.5
Urban	13	81.25
Age group		

(Continued)

Table I (Continued).

Socio-Demographic Characteristics	Frequency	Percentage
<25 Years	5	31.25
25–34 Years	9	56.25
>35Years	2	12.5
Marital status		
Married	16	100
Educational status		
Primary	6	37.5
Secondary	6	37.5
College or above	4	25
Occupational status		
Housewife	4	25
Merchants	1	6.25
Self -Employee	9	56.25
Student	2	12.5
Family size		
<3	2	12.5
3–4	8	50
>5	6	37.5
Mothers' monthly income		
Not specified	1	6.25
501–1000 ETB	1	6.25
>1000 ETB	14	87.5
Gravidity		
Primigravida	9	56.25
Multigravida	7	43.75
Period of gestation		
1st trimester	2	12.5
2nd trimester	5	31.25
3rd trimester	9	56.25
Antenatal care visit		
<3 visits	9	56.25
3–4 visits	7	43.75

Lived Experience of Pregnant Women During COVID-19 Pandemic

The findings of the qualitative analysis are grouped under 5 predominant themes: Mental health consequence of COVID-19 pandemic; fear of health impact of COVID-19 on the mother and the child; Concerns over negative economic impact of COVID-19 pandemic, COVID-19 influence on social engagements and challenge on getting reliable information.

Theme 1: Mental Health Consequence of COVID-19 Pandemic

During the in-depth interview, most of the participants expressed that they frequently experienced anxiety, fear, and suspicion as the predominant psychological issues. This was largely attributed to the profound changes in their lifestyle brought about by the impact of COVID-19 compared to the pre-pandemic period. Additionally, participants mentioned that media coverage often emphasized the number of deaths and the consequences of lockdown measures, rather than focusing on the specific characteristics of the disease itself.

....Everyone in the town panicked when they heard for the first time that COVID-19 cases had been identified. I recognized at the time that things would never be the same again. We were all terrified and suspicious of one another. It was an embarrassing situation because everyone assumed that every people had been infected with the virus. (P-10, Age- 24, primigravida)

....Being stuck at home all day was a miserable experience for me. I frequently feel isolated and confined to my home. It's extremely depressing moment since I've never felt so alone in my life. This is my first experience at something like this. Aside from the confinement, that time I spent as pregnant the time I spend with the pregnancy parallel strains me. (P-15, Age- 26, primigravida)

Participants who had major health problems in their most recent pregnancies indicated that they felt severe anxiety about the COVID-19 threat, and they also highlighted a lack of understanding regarding safety and preventative measures of COVID-19 during pregnancy and after childbirth make them suspicious.

...I don't want my baby to die the same way my second baby did. When I initially heard about COVID-19 and the influence it might have on my pregnancy, it worried and depressed me. I'm continuously thinking about how to safeguard myself and my kid since I lack the necessary knowledge. (P-4, Age- 31, Gravida -3, Para -1)

...I experienced a spontaneous abortion during my first pregnancy, and I desperately needed that child, therefore I am terrified of becoming infected with COVID-19 because I may add to the likelihood of infection, putting my baby in danger. (P-5, Age- 31, Gravida -3, Para -1)

Theme 2: Fear of Health Impact of COVID-19 on the Mother and Child Adverse Effect of COVID-19

Yet there is still lack of a well-designed clinical study of the COVID-19 impact on pregnancy outcomes, however some studies revealed that COVID-19 infection during pregnancy is associated with preterm labor and premature rupture membrane and perinatal transmission.

During the in-depth interview, the participants expressed their primary worry about having a healthy baby. A majority of the study participants believed that being pregnant increased their susceptibility to potential risks compared to non-pregnant women and they felt that this is due to their being in pregnant state.

...Pregnant women, in my opinion, are more vulnerable to acquiring the COVID-19 infection since they have lesser self-defense capacities due to their pregnancy state when compared to other normal people, hence once pregnant women are infected, I believe it has a bad health consequence. Being pregnant during this time period entails a significant deal of responsibilities. As a result, COVID-19 has far-reaching effects for both the mother and the fetus that go beyond health concerns. (P-16, Age- 20, primigravida)

...I am really anxious that the baby's fate or outcome will be jeopardized because the infant cannot be avoided contracting the virus throughout pregnancy and breast-feeding because, under all situations, I believe I am riskier than any other normal non-pregnant woman. (P- 6, Age-32, Gravida-II, Para -I)

The study participants who have experienced medical conditions on the current pregnancy expressed their concerns that they are in a very difficult position to deal with their medical problem as well as the COVID-19 situation.

...I has been told by the doctor that I have a problem with the placenta. I was particularly concerned about the consequences of the problem at the moment. On the hand COVID-19 was another threat in addition to my problem ...The doctors assured me the problem would fix itself as the pregnancy continued. But, at the time, I was really concerned about my health, which could be hampered if I become infected with COVI-19. (P-5, Age- 31, Gravida-2, Abortion-1)

...Pregnancy is both a challenging and joyous time in a woman's life. It's very difficult for me because I live with HIV, and the COVID-19 pandemic scenario makes matters worse because it necessitates extra care. If I became infected with COVID-19, it will be extremely dangerous for me and the unborn child. I'm having a difficult time dealing with the COIVID-19 outbreak, and the implications for pregnant women are highly concerning.(P-12, Age- 29, Gravida-II, Para-I, RVI- Positive)

COVID-19 Threat on Maternity Care

During the interviews, pregnant women were concerned about possible obstacles they face on maternity care due to fear of contamination in the hospital and safety issues and perceived poor quality of health care delivery during the pandemic.

...I am concerned that if the pandemic advances, the shutdown of everything, including transportation and other necessary services, will have an impact on my medical care. I will be unable to attend my regular ANC appointment because I am afraid of contracting COVID-19 from healthcare staff. I'm also concerned that if the pandemic worsens, it will have a large impact on many elements of our lives, making living tough (P-1, Age- 28, Gravida-III, A-1, Para- 1

...There is a rumor in the community that certain healthcare providers who worked in quarantine centers were exposed to and infected with COVID-19, which is quite concerning to me. I can't make up my mind whether or not I should come here for the antenatal visits. (P-3, Age-27, Primigravida)

... A safety issue at the hospital triage system is in a very alarming condition in my perception; the system is extremely difficult, especially at this time because it functions similarly to a market place. Everyone gathered in a disorderly manner in one location. I can't always get someone to accompany me to the triage center, and the card withdrawal room is extremely crowded, resulting in unavoidable physical contact (P-11, Age- 27, Gravida- II, Para -I)

Some pregnant women also said they were postponed the appropriate starting time for their prenatal visit because of the outbreak of pandemic.

...Many pregnant refuse to visit the hospital because they are afraid of COVID-19. It's difficult for me to pick where I'll give birth because, in the aftermath of the COVID-19 pandemic, the safety situation in healthcare institutions is poor, and many people believe that the quality situation in hospitals is even worse. No one trusts anybody else as a result of the COVID-19 threat. Particularly when it comes to the healthcare providers who are allegedly infected with the diseases (P-7, Age- 24, primigravida)

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Challenge Over COVID-19 Prevention Methods

During the interviews, the pregnant women highlighted their own experiences with COVID-19 prevention measures, noting that their trust in COVID-19 prevention tactics is equivocal. Some of the participants voiced skepticism about the effectiveness of face masks, social distancing, and routine hand washing because the community does not follow these preventative measures made difficult for mitigation effort of the women. The participants majorly underlined that the community is extremely reluctant in adhering mitigations strategies which is very dangerous behavior for spread of the virus in the community. A Gravida-2 woman expressed her feeling as:

....Our community has been entirely consumed by day-to-day life activity; there is largely a problem in wearing facemask and keeping social distancing measures. This is a problem that, in my opinion, impacts everyone, and we are not taking it seriously enough to understand COVID-19's health consequences. (P-5, Age-31, Gravida-2, Abortion-1)

In addition, another participant underscored this concern as:

...Some people strictly adhere to it, but I have witnessed that the majority do not, which causes you to overlook it. I believe it's also difficult for pregnant women to wear it all the time because the face mask causes suffocation, which is discouraging for me. However, I make every effort to follow what the government says (P-19, Age-26, primigravida)

The other obstacle greatly underlined by the respondents is in the mitigation strategy for COVID-19 is fictional belief or myths in the community regarding virus itself, transmission, and ways of prevention.

....What I've noticed that, which also influences me, is that there is a common misconception and understanding about the COVID-19 case, which is that the thinking or argument that it really exists, even if a significant number of people believe it is a disease of white people and they don't believe black people are susceptible to the disease, they ask the question, "Why wouldn't individuals we know or among us get it or become infected with it if it is real?" As a result, I believe there is an obvious difference in perception, and the overall issue will be difficult unless everyone gives a due emphasis for the situation (P-14, Age- 23, Primigravida)

Theme 3: Concerns Over Negative Economic Impact of COVID-19 Pandemic

The majority of the pregnant women participated in the qualitative study emphasized that the economic burden was extremely high in this pandemic. The participants stated that growing inflation rates, unemployment or job loss, and unfavorable condition for private business continue to pose a severe threat to their life. A 30-year-old multigravida mother expressed the feeling as:

.... I deal my life by selling coffee and tea just in front of my house. I've put the business on hold for the time being. My commercial activities were interrupted as a result of the pandemic on people's intentions and preferences for the usage of certain materials, such as coffee cups, as these materials are shared by many people (P-2, Age- 30, Gravida-III, Para-II)

.... My family relies on my husband's income because I am a housewife with no source of income. Higher price level had a significant impact on me in the middle of the epidemic, just after it began. Everything you buy has become much more expensive, and I hope it will become increasingly difficult for people like me to continue in this manner (P-4, Age- 31, Gravida -III, Para -1)

The interviewed women also mostly indicated that during prenatal checks, many women are advised and urged to save money as a complication readiness plan, but many pregnant women point out that they find it difficult particularly during this pandemic times.

...I am currently employed in the private sector, and I am concerned that my salary will be deducted or even I may be get sacked from my work. Moreover, I might not have enough money to save as to prepare for delivery of my child (P-14, Age-23, Primigravida)

...My savings have taken a significant hit as a result of the pandemic. I am responsible for my family's basic needs, and saving money is critical for everything, including medical treatments and appointments in case of an emergency, so I must work harder and longer hours. The pandemic, on the other hand, is having a significant impact on my business work. (P-12, Age- 29, Gravida-II, Para-I)

Theme 4: COVID-19 Negative Influence on Social Engagements and Getting Support

Social engagement is beneficial during pregnancy. Having being together with the loved ones, having visits and support from family members, close relatives and friends help to overcome emotional and psychological burdens during your pregnancy.

During the outbreak of the COVID-19 pandemic, most of the interview participants emphasized that, the support from family, relatives and colleagues were not be easily accessible in the town. A primigravida woman stated this issue as:

...I was unable to interact with my closest family members, particularly my mother, it was the most difficult aspect for me. You're aware that you'll need your family's help during your pregnancy. I was alone to face this once-in-a-lifetime experience, and I didn't have that crucial companionship, and as a result, I was hurt and I overcome all of those adversities on my own. (P-9, Age- 29, primigravida)

The other participant of the in-depth interview expressed the situation...

...I've been in a lot of pain. I am unable to prepare proper food needed for pregnant women. I wouldn't be troublesome if my sister was with me. As a result, I've lost significant support from my family members at this crucial moment (P-15, Age-26, primigravida)

The study participants, on the other hand, expressed major concerns about receiving assistance from their support. They were unsure whether they would receive support and assistance during the delivery time from a family member because hospitals have imposed more restrictions on visitors to the hospital as the pandemic worsened day by day.

.... In some cases, hospitals restrict access to support people, which worry me a lot about who will be my helper during the childbirth process. I'm not sure what will happen; maybe I'll get COVID-19 and won't be able to nurse my child. ...Who is going to stick by me? (P-7, Age-24, Primigravida)

Theme 5: Challenge on Getting Reliable Information

According to the qualitative research, the most essential sources of information for pregnant women about the pandemic and disease effect were radio and television. They believed that access to information only through these methods was not sufficient for their competent understanding of the COVID-19. They noted some information on COVID-19 are too much and terrifying the way presented, unreliable and contradicts one another regarding transmission and protection methods. The challenges on getting reliable source of information and the way the information presented were described by the participants as:

.... Every media is talking about the death toll in different countries and number of people infected with the virus, it terrifies and depress to hear this all the time. I think they must more focus on virus mode of transmission and ways of prevention. (P-7, Age-24, Primigravida)

.... Now days there are so many different types of information sources from which you can get information about COVID-19, and it sometimes confusing and this causes people to be careless and negligent. I attempted to stay away from this one, but I focus on the government's message rather than the social media. (P-8, Age-26, Primigravida)

Most of the participants also claim that during the antenatal care visits they noticed that most of health care providers are not giving information with adequate depth about COVID-19. Furthermore, they expressed that when they got the health facility they were expecting such an important health education about the pandemic however adequate information were not provided by the responsible health care providers.

.... I had seen lack of adequate information provided to women who request ANC visits. It would be preferable for us if we were provided any information on the disease, because it would be beneficial for us to be protected and take the appropriate precautions, while information from other sources is sometimes inaccurate misleading and difficult to obtain. (P-13, Age-29, Gravida-II, Para-I)

Some other participants also indicated that women living in urban area have more opportunity to get information and education regarding COVID-19 compared to the rural one.

...Basic information regarding COVID-19 may not be difficult to obtain for women in urban areas, but rural women do not have this access, and they must be informed about COVID-19's threats and how to defend themselves. (P-10, Age- 24, Primigravida)

Discussion

The healthcare system has experienced a significant shift due to the COVID-19 pandemic, demanding special attention to pregnant women owing to the potential risks associated with the virus and their pregnancy status. Thus, pregnant women, specifically, face a greater likelihood of navigating both the challenges of the pandemic and the childbirth process. Unlike individuals who are not pregnant, they are more vulnerable to contracting infectious diseases that pose a threat to both their well-being and the health of the fetus.¹⁹⁻²¹

Our study found five predominant themes: mental health consequences of the COVID-19 pandemic, health impact of COVID-19, concerns over the economic impact of the COVID-19 pandemic, COVID-19 influence on social engagements, and challenge on getting reliable information.

In our study, the most prominent theme was the impact of COVID-19 on mental health. During the in-depth interviews, most participants expressed high levels of anxiety, fear, and suspicion. Participants attributed these emotions primarily to the significant lifestyle changes brought about by the pandemic compared with the pre-COVID period. Additionally, they mentioned that media coverage focused more on the number of deaths and consequences of lockdown,

rather than providing in-depth information about the disease itself. This study aligns with a previous study conducted in the Philippines, which also found that living with constant anxiety and fear were widespread experiences among pregnant women during the COVID-19 outbreak.²⁰ Another study by Draganović et al, an interpretative phenomenological analysis conducted to explore the experiences of pregnancy and motherhood among Bosnian women during the COVID-19 pandemic, indicated that the main theme throughout their narratives was a fear of the unknown. The study also revealed that these women have endured significant stress and negative emotions, as well as a feeling of their reality being disrupted by the pandemic.²¹ A recent study by Mortazavi and Ghardashi (2021) examined disruptions to daily life and the loss of tranquility and regular routines as key themes. Other studies^{14,22–25} have reported similar findings.

The impact of COVID-19 on the outcomes of pregnant women and newborns is not yet fully understood. However, recent studies have indicated that there could be an association between COVID-19 and higher risks of conditions such as preeclampsia, preterm birth, and other negative pregnancy outcomes.¹⁴ In our study, it was found that most participants believed that being pregnant puts women at higher risk than those who are not pregnant. They also believed that the potential adverse effects of the virus could be more dangerous for pregnant women owing to their pregnancy status. These perceptions are likely influenced by concerns about the impact of the virus on maternal health, fetal development, and the increased vulnerability of pregnant women to severe illness.

Numerous studies have highlighted the increased likelihood of hospitalization, severe COVID-19 symptoms, chronic lung disease, diabetes, and cardiovascular disease among pregnant women with COVID-19. Additionally, pregnant women with COVID-19 are more likely to require admission to the intensive care unit (ICU) and invasive ventilation. However, pregnant women are less likely to report symptoms, such as headaches, body aches, fever, chills, and diarrhoea. Notably, the risk of death appears to be comparable between pregnant and non-pregnant individuals.^{26,27} Another systematic review and meta-analysis revealed that among hospitalized pregnant women infected with COVID-19, more than 90% had pneumonia. COVID-19 was also associated with a higher rate (and pooled proportions) of preterm birth, preeclampsia, cesarean delivery, and perinatal death.²⁸ In contrast to our findings, Adhikari et al found no significant differences in the severity of symptoms or adverse outcomes between pregnant and non-pregnant individuals with COVID-19. This discrepancy could be due to the sample size, study design, and settings.²⁹

During pandemic planning, pregnant women should be considered a high-priority group and equitable access to maternal healthcare must be ensured. The healthcare system should ensure that maternal care remains accessible and uninterrupted.^{30,31} Our study revealed that pregnant women are concerned about various obstacles they may face during maternity care, such as fear of contamination in hospitals, safety issues, and perceived low quality of healthcare delivery during the pandemic. Abdisa et al conducted a study on access to maternal health services during the COVID-19 pandemic and found that a significant number of mothers experienced delays.³² Furthermore, Participants raised concerns regarding how the virus could be transmitted and its implications for their unborn child, which influenced their perception of heightened risk during pregnancy. Conversely, another study found that despite the aforementioned fears, pregnant women's utilization of healthcare services experienced only minimal disruption during the initial phases of the pandemic.³³

The findings of our study revealed that during the interviews, pregnant women emphasized their own experiences regarding the measures taken to prevent the spread of COVID-19. They expressed a mixed level of trust in these preventive tactics. Several participants expressed doubts regarding the efficacy of wearing face masks, practicing social distancing, and maintaining regular hand hygiene. This skepticism arose from the observation that the community as a whole did not adhere to these preventive measures, making it difficult for women to effectively mitigate the risk of contracting the virus. The participants emphasized that the community's reluctance to follow these mitigation strategies is extremely concerning, as it poses a significant threat to the spread of the virus within the community. In a study conducted by Temesgan et al in Ethiopia, similarly low adherence to COVID-19 preventive practices among pregnant women was observed.¹⁷ Another study conducted in Debre Tabor, Ethiopia reported that the majority of pregnant women had insufficient knowledge and did not adopt appropriate preventive practices.³⁴

In our qualitative study, the majority of pregnant women highlighted the significant economic burden they experienced during the pandemic. They expressed concerns about rising inflation rates, unemployment, job loss, and unfavourable conditions for private businesses, all of which posed a serious threat to their lives. In accordance with our findings, a phenomenological study by Akhter et al also found that social and economic distress, including limited transportation, loss of income, and difficulty accessing

loans, emerged as a major theme among pregnant women during the COVID-19 pandemic.³⁵ Similarly, Yadav et al demonstrated that the majority of pregnant women experienced adverse socioeconomic effects on their daily lives, with 55.6% reporting some impact, 9.1% reporting moderate impact, and 1.1% reporting a significant impact.³⁶ Various studies have reported unequal socioeconomic impacts of the COVID-19 pandemic.^{33,37,38}

Our research also revealed that social engagement is beneficial during pregnancy. Being in the company of loved ones and receiving visits and support from family members, close relatives, and friends can help alleviate emotional and psychological burdens throughout the pregnancy journey. Restrictions in social engagement pose a great concern for pregnant women. Another study supports our findings by highlighting the various measures implemented to combat the transmission of the virus and control the COVID-19 pandemic, which have resulted in significant challenges across the economic, social, political, and psychological domains. The crisis caused by the COVID-19 pandemic has led to widespread unrest in society and unprecedented changes in lifestyles, work, and social interactions. Increased social distancing measures have had a profound impact on human relationships.³⁹ Furthermore, another study revealed that pregnant women felt a lack of social support due to restrictions imposed by the COVID-19 pandemic and experienced a deep sense of loss regarding their expectations for their pregnancy and the postpartum period.⁴⁰ Similar findings have also been reported, illustrating how the COVID-19 pandemic has dramatically transformed the nature of social interaction.^{36,41}

According to the qualitative research conducted, radio and television were the primary sources of information for pregnant women regarding the impact of the pandemic and diseases. However, relying solely on these methods did not sufficiently equip pregnant women with a comprehensive understanding of COVID-19. Pregnant women found some information about COVID-19 to be excessive and frightening with the manner of presentation, causing concern. Additionally, they perceived the information as unreliable and contradictory, particularly in terms of transmission and protective measures. A qualitative analysis conducted by Rezaei et al highlighted that the information needs of pregnant women during the COVID-19 pandemic could be categorized into four areas. These include 1) enhancing the self-efficacy of pregnant women, 2) providing information that promotes awareness about preventive measures, 3) increasing perceived threat awareness, and 4) familiarizing pregnant women with the functions of the healthcare system in managing the COVID-19 pandemic.¹⁶

Strength and Limitation

The strength of this study is that we have gained adequate information from the study participants until information saturation achieved thereby deeply addresses their real experience during the pandemic. In addition, different measures were employed to enhance rigor including respondent validation, team debriefing and constant comparison. The limitation of this study includes the experience of the women were addressed in a single hospital setting and post pandemic experience and challenges were not evaluated.

Conclusion and Recommendation

This study identified that pregnant women experienced various challenges during the pandemic which includes psychological problems, health impact of COVID-19, economic problems, lack of reliable information and limited social support. Hence, implementing a customized approach by integrating psychosocial interventions with prenatal care services and conducting intensive health education sessions and economic empowerment are beneficial as mitigation strategies to better prepare for future pandemics.

Abbreviations

ANC, Antenatal care; COVID-19, Corona Virus Disease 2019; HCPs, Health Care Providers; IPC, Infection Prevention and Control; PPE, Personal Protective Equipment's; SNNPR, South Nation Nationalities and Peoples Region, WHO, World Health Organization.

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Data Sharing Statement

All the required documents are available in the hands of the corresponding author and can be supplied upon request.

Ethics Approval and Consent to Participate

We adhered to the Declaration of Helsinki, which advocates for the potential benefits for the participants. Institutional Review Board (IRB) at Dilla University, College of Medicine and Health Sciences, approved our study ethically. Verbal and written consent were obtained from the study participants after informing them about the study's objectives, procedures, risks, and benefits including consideration for publications quotes and response from participants anonymously. The study participants had the right to withdraw from the study at any stage of data collection.

Acknowledgments

We thank Dilla University for giving us this opportunity and providing us with financial support. Furthermore, we are grateful for data collectors, study participants, and health professionals of Dilla University teaching hospital for their cooperation and invaluable inputs.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

This study received funding from Dilla University.

Disclosure

The authors declare that they have no competing interests in this work.

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